S.SCHICKENDANTZ, J.RUSS

Ethanol gelation test in disseminated intravascular coagulation of new-borns

Diseases of new-borns - (septicaemia, respiratory distress syndrom, decompensation of metabolism or hemodynamic alterations and malformations) - are often accompanied by disseminated intravascular coagulation (DIC), which itself induces a fatal development.
By determination of soluble monomeric fibrin, the ethanol gelation test is regarded suitable for diagnosis of DIC.
We believe too, that this test can be used, especially in the early infancy :

1. It can be determined quickly.
   About 20 min. after blood sampling the test results are ready. This is a tolerable period until therapy is started.
2. A small quantity of blood is needed.
   From a blood sample of 1.8 ml with 0.2 ml 0.1 M buffered citrat all important parameters can be determined: thromboplastin time, partial thromboplastin time, thrombin time, fibrinogen, and ethanol gelation test.
3. The test itself is very simple and can be performed at any time of day or night.

The test should be done prior to a sudden change for the worse in the general condition, i.e. not after manifest bleeding.
During the last twelve months we investigated fifty four times for DIC in new-borns (Fig.1).

The results of the first clotting tests, when DIC was suspected, are shown in Fig.2.
There is no significant difference in newborns with or without DIC. Most test results are in the normal range for new-borns (hatched areas).

Heparin therapy was started in all children with positive ethanol gelation test, normalisation of clotting tests was established in every case.

Since we have started performing ethanol gelation test, hemorrhagic diseases in new-born have been determined earlier. In combination with other intensiv care therapies improvement in treatment of severe diseases of new-borns has been observed.

0300-5577/81/0091-0054 $ 2.00

ETHANOL GELATION TEST IN NEWBORN
(in a period of 12 month)
Childrens' Hospital, University of Cologne
n = 54

septicaemia	cardiac defects	shock	others
positive ethanol gelation test n = 18			
14 ✝ 1	2 ✝ 1	2 ✝ 1	
negative ethanol gelation test n = 36			
11 ✝ 1	2 ✝ 1	1 ✝ 1	21 ✝ 5

Fig.1 Ethanol gelation tests in new-borns

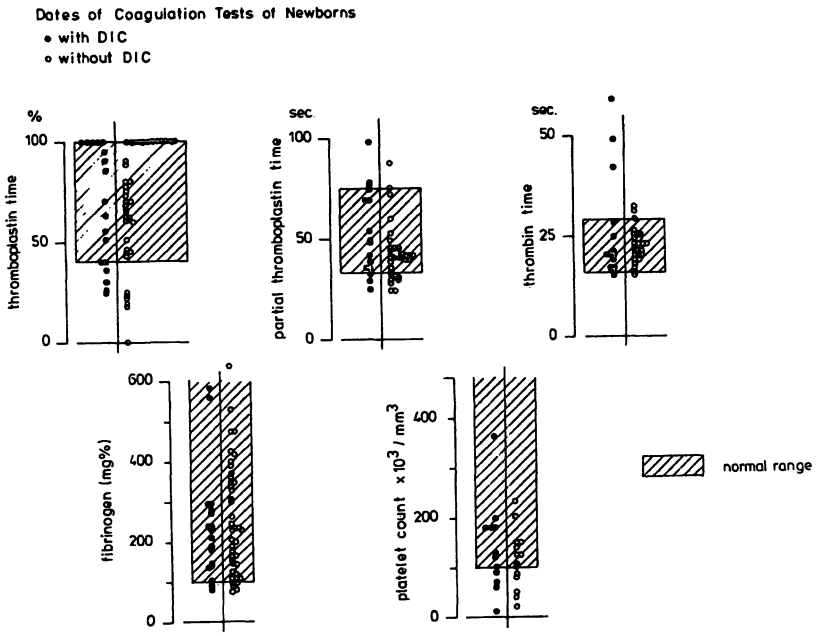

Fig.2 Clotting tests in new-borns

Dr.S.Schickendantz
Univ.-Kinderklinik
Josef-Stelzmann Str.9
D-5000 Köln 41 /Germany